CLAIMS

67. (New) A physical vapor deposition target comprising a copper material with a fac centered cubic unit cell, having a sputtering surface, and comprising:

a predominate <220> crystallographic texture across the sputtering surface; and

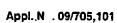
an average grain size across the sputtering surface of less than or equal to about 30 microns.

- 68. (New) The physical vapor deposition target of claim 67 further comprising one or more of aluminum, silver, and gold.
- 69. (New) The physical vapor deposition target of claim 68 comprising aluminum.
- 70. (New) The physical vapor deposition target of claim 68 comprising silver.
- 71. (New) The physical vapor deposition target of claim 68 comprising gold.
- 72. (New) The physical vapor deposition target of claim 67 wherein the average grain size across the sputtering surface is less than or equal to 1 micron.
- 73. (New) The physical vapor deposition target of claim 67 further comprising substantially no pores or voids proximate the sputtering surface.

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- 74. (New) The physical vapor deposition target of claim 67 wherein the predominate <220> crystallographic texture is a strong <220> crystallographic texture.
- 75. (New) The physical vapor deposition target of claim 67 comprising a ratio of the<220> crystallographic orientation to all other orientations of the face centered cubic unit cell of at least about 80%.
- 76. (New) The physical vapor deposition target of claim 67 comprising a ratio of the<220> crystallographic orientation to all other orientations of the face centered cubic unit cell of at least about 90%.
- 77. (New) The physical vapor deposition target of claim 67 wherein substantially all of the grain sizes across the sputtering surface are less than about 30 microns.
- 78. (New) The physical vapor deposition target of claim 67 wherein substantially all of the grain sizes across the sputtering surface are less than 1 micron.
- 79. (New) The physical vapor deposition target of claim 67 wherein the <220> texture comprises predominately axial <220> orientations.
- 80. (New) The physical vapor deposition target of claim 67 wherein the <220> texture comprises predominately planar <220> orientations.

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(New) The physical vapor deposition target of claim 67 wherein any 81. precipitates present in the target have/a maximum dimension of 0.5 micron.